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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,318	08/22/2003	Ronald L. Mahany	14366US02	9697

23446 7590 11/05/2009

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EXAMINER	
MAI, THIEN T	

ART UNIT	PAPER NUMBER
2887	

MAIL DATE	DELIVERY MODE
11/05/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/646,318	MAHANY ET AL.	
	Examiner	Art Unit	
	THIEN T. MAI	2887	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *56-72* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *56-72* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 October 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement

Acknowledgement is hereby made of Amendment filed 07/20/2009.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim(s) 56 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sandstedt* (US 4415065 A) in view of *Allais* (US 4794239 A) and further in view of *Kang* (US 5058150 A).

Re claims 56, *Sandstedt* discloses a handheld wireless communications device having at least one antenna, comprising:

a terminal that has a microphone and a speaker (items 33 and 35 in Fig. 1A) that provide voice input/output, wherein the terminal provides a voice recognition control system that uses the microphone, wherein the terminal provides a graphical user interface that includes a display 56 (Fig. 3);

a wireless transceiver arranged to transmit and receive radio frequency signals, the transceiver being operatively coupled with the at least one antenna (Fig. 1A), the transceiver being operatively coupled to a rechargeable battery;

a sensor that senses an optical OCR image; and

a connector arranged to couple the wireless transceiver with the terminal and to transmit signals, wherein the terminal is coupled with the connector and is arranged to standardize logic

levels and a format of the signals transmitted over the connector (the connector here is interpreted as anything that connects or is coupled between the antenna and the terminal and is to carry logic signals; in this case, *Sandstedt* teaches the interior of handheld device includes at least a microprocessor and RAM that carry logic information).

Sandstedt is silent with respect to CCD sensor.

Allais discloses a CCD sensor for scanning OCR characters.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Allais* in order to read the OCR characters taught in *Sandstedt*.

Sandstedt as modified by *Allais* does not teach a transmitter/receiver circuitry as currently amended.

Kang discloses the amended transmitter/receiver circuitry as follows:

wherein the wireless transceiver comprises at least one transmitter circuitry and at least one receiver circuitry,

wherein the transmitter circuitry comprises

a transmitter 207 (Fig. 2), a transmitter level adjust circuitry (i.e. synthesizer 252 that adjusts voice level for transmission), a low pass filter 253 (Fig. 3) and a modulation-generator-and-limiter circuitry 222,

wherein the modulation-generator-and-limiter circuitry is coupled to the low pass filter which, in turn, is coupled to the transmitter level adjust circuitry which, in turn, is coupled to the transmitter (see Fig. 2, 3, 4A)

wherein the receiver circuitry comprises a receiver, a second low pass filter and data recovery circuitry,

wherein the receiver 202 is coupled to the second low pass filter 244/243 which, in turn, is coupled to the data recovery circuitry 204 (Figs. 4B-4D)

wherein the modulation generator-and-limiter circuit 222 is coupled to an output of a processor 206 and wherein the data recovery circuitry is coupled to an input of the processor.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Kang*.

One of ordinary skill in the art would be motivated to employ the teachings of *Kang* since they would provide better control of high frequency noise that may be generated from the receiving signals and the microphone for higher quality audio signal to be transmitted.

With respect to "wherein the wireless transceiver is housed in a module that can be removed and replaced with a different type of module without requiring tuning adjustments", *Sandstedt* 's the housing of device 12 is interpreted as the module that houses the transceiver.

Sandstedt as modified by *Allais* and *Kang* does not expressly teach "the module can be removed and replaced with a different type of module without requiring tuning adjustments".

It is noted that *Sandstedt* as modified by *Allais* and *Kang* does not teach whether an element must be tuned in order for the device to function as a transceiver each time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made that the module can be removed and replaced with a module having the same transceiver specifics, which can be of a different type characterized by different shapes, brand name, and/or colors.

3. Claim(s) 60, 65, 69 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sandstedt* (US 4415065 A) in view of *Allais* (US 4794239 A) and further in view of *Kang* (US 5058150 A) and *Gombrich* (US 4916441 A).

Re claims 60, 65, 69, *Sandstedt* discloses a handheld wireless communications device having at least one antenna, comprising:

a terminal that has a microphone and a speaker (items 33 and 35 in Fig. 1A) that provide voice input/output, wherein the terminal provides a voice recognition control system that uses the microphone, wherein the terminal provides a graphical user interface that includes a display 56 (Fig. 3);

a wireless transceiver arranged to transmit and receive radio frequency signals, the transceiver being operatively coupled with the at least one antenna (Fig. 1A), the transceiver being operatively coupled to a rechargeable battery;

a sensor that senses an optical OCR image; and

a connector arranged to couple the wireless transceiver with the terminal and to transmit signals, wherein the terminal is coupled with the connector and is arranged to standardize logic levels and a format of the signals transmitted over the connector (the connector here is interpreted as anything that connects or is coupled between the antenna and the terminal and is to carry logic signals; in this case, *Sandstedt* teaches the interior of handheld device includes at least a microprocessor and RAM that carry logic information).

Sandstedt is silent with respect to a CCD sensor.

Allais discloses a CCD sensor for scanning OCR characters.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Allais* in order to read the OCR characters taught in *Sandstedt*.

Sandstedt as modified by *Allais* does not teach a transmitter/receiver circuitry as currently amended.

Kang discloses the amended transmitter/receiver circuitry as follows:

wherein the wireless transceiver comprises at least one transmitter circuitry and at least one receiver circuitry,

wherein the transmitter circuitry comprises

a transmitter 207 (Fig. 2), a transmitter level adjust circuitry (i.e. synthesizer 252 that adjusts voice level for transmission), a low pass filter 253 (Fig. 3) and a modulation-generator-and-limiter circuitry 222,

wherein the modulation-generator-and-limiter circuitry is coupled to the low pass filter which, in turn, is coupled to the transmitter level adjust circuitry which, in turn, is coupled to the transmitter (see Fig. 2, 3, 4A)

wherein the receiver circuitry comprises a receiver, a second low pass filter and data recovery circuitry,

wherein the receiver 202 is coupled to the second low pass filter 244/243 which, in turn, is coupled to the data recovery circuitry 204 (Figs. 4B-4D)

wherein the modulation generator-and-limiter circuit 222 is coupled to an output of a processor 206 and wherein the data recovery circuitry is coupled to an input of the processor.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Kang*.

One of ordinary skill in the art would be motivated to employ the teachings of *Kang* since they would provide better control of high frequency noise that may be generated from the receiving signals and the microphone for higher quality audio signal to be transmitted.

Sandstedt as modified by *Allais* and *Kang* does not teach to a touch display.

Gombrich discloses that touch display technology is too old and well known in the art (see item 22d in Fig. 3-8, col. 6 lines 54-55)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the CCD teachings of *Gombrich* to facilitate data input without requiring space, wiring, and controls for buttons.

With respect to "wherein the wireless transceiver is housed in a module that can be removed and replaced with a different type of module without requiring tuning adjustments", *Sandstedt* 's the housing of device 12 is interpreted as the module that houses the transceiver.

Sandstedt as modified by *Allais* and *Kang* does not expressly teach "the module can be removed and replaced with a different type of module without requiring tuning adjustments".

It is noted that *Sandstedt* as modified by *Allais* and *Kang* does not teach whether an element must be tuned in order for the device to function as a transceiver each time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made that the module can be removed and replaced with a module having the same transceiver specifics, which can be of a different type characterized by different shapes, brand name, and/or colors.

4. Claim(s) 57-59 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sandstedt* (US 4415065 A) modified by *Allais* (US 4794239 A) and *Kang* (US 5058150 A) further in view of *Katner* (US 5,059,951). *Sandstedt*'s, *Allais*'s, and *Kang*'s teachings have been discussed above.

Re claims 57-59, *Sandstedt* as modified by *Allais, Kang,* and *Gombrich* does not teach at least one flat antenna comprises two antennas having different structure relative to each other.

Katner discloses two different flat coil antennas 29-30 (Fig. 4) embedded in a scan terminal for reading RFID tags 3 (Fig. 1-2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Katner* in order to provide means to read/scan additional type of tag beside barcode.

5. Claim(s) 61-63, 66-68, 70-72 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sandstedt* (US 4415065 A) modified by *Allais* (US 4794239 A) and *Gombrich* (US 4916441 A) and *Kang* (US 5058150 A), further in view of *Katner* (US 5,059,951). *Sandstedt*'s, *Allais*'s, *Gombrich*'s, and *Kang*'s teachings have been discussed above.

Re claims 61-63, 66-68, 70-72, *Sandstedt* as modified by *Allais, Kang,* and *Gombrich* does not teach at least one flat antenna comprises two antennas having different structure relative to each other.

Katner discloses two different flat coil antennas 29-30 (Fig. 4) embedded in a scan terminal for reading RFID tags 3 (Fig. 1-2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Katner* in order to provide means to read/scan additional type of tag beside barcode.

6. Claim(s) 64 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sandstedt* (US 4415065 A) modified by *Allais* (US 4794239 A) and *Gombrich* (US 4916441 A)

and *Kang* (US 5058150 A), further in view of *Zouzoulas et al.* (5,059,778). *Sandstedt*'s, *Allais*'s, *Gombrich's*, and *Kang*'s teachings have been discussed above.

Sandstedt's, *Allais*'s, *Gombrich's*, and *Kang*'s teachings are silent with respect to limitation of claim 64.

Re claim 64, *Zouzoulas et al.* discloses an apparatus comprising a terminal 10, 100 and communication module 30, 300 (Fig. 1-2, col. 8 line 37) wherein power to the wireless battery operated module 300 is removed when inactivity is sensed (col. 8 lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Zouzoulas et al.* in order to conserve the battery power of the handheld battery operated apparatus.

Remarks

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THIEN T. MAI whose telephone number is (571)272-8283. The examiner can normally be reached on Monday through Friday, 8:00 - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve S. Paik can be reached on 571-272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thien T Mai/ /Thien M. Le/

Examiner, Art Unit 2887 Primary Examiner, Art Unit 2887